



ATIS-0700036.v002

ATIS Standard on -

**Wireless Emergency Alert (WEA) 3.0 Mobile Device Behavior
(MDB) Specification**



As a leading technology and solutions development organization, the Alliance for Telecommunications Industry Solutions (ATIS) brings together the top global ICT companies to advance the industry's most pressing business priorities. ATIS' nearly 200 member companies are currently working to address the All-IP transition, 5G, network functions virtualization, big data analytics, cloud services, device solutions, emergency services, M2M, cyber security, network evolution, quality of service, billing support, operations, and much more. These priorities follow a fast-track development lifecycle — from design and innovation through standards, specifications, requirements, business use cases, software toolkits, open source solutions, and interoperability testing.

ATIS is accredited by the American National Standards Institute (ANSI). The organization is the North American Organizational Partner for the 3rd Generation Partnership Project (3GPP), a founding Partner of the oneM2M global initiative, a member of the International Telecommunication Union (ITU), as well as a member of the Inter-American Telecommunication Commission (CITEL). For more information, visit www.atis.org.

Notice of Disclaimer & Limitation of Liability

The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted engineering or other professional standards and applicable regulations. No recommendation as to products or vendors is made or should be implied.

NO REPRESENTATION OR WARRANTY IS MADE THAT THE INFORMATION IS TECHNICALLY ACCURATE OR SUFFICIENT OR CONFORMS TO ANY STATUTE, GOVERNMENTAL RULE OR REGULATION, AND FURTHER, NO REPRESENTATION OR WARRANTY IS MADE OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. ATIS SHALL NOT BE LIABLE, BEYOND THE AMOUNT OF ANY SUM RECEIVED IN SETTLEMENT BY ATIS FOR THIS DOCUMENT, AND IN NO EVENT SHALL ATIS BE LIABLE FOR LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. ATIS EXPRESSLY ADVISES THAT ANY AND ALL USE OF OR RELIANCE UPON THE INFORMATION PROVIDED IN THIS DOCUMENT IS AT THE RISK OF THE USER.

NOTE - The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to whether use of an invention covered by patent rights will be required, and if any such use is required no position is taken regarding the validity of this claim or any patent rights in connection therewith. Please refer to [<http://www.atis.org/legal/patentinfo.asp>] to determine if any statement has been filed by a patent holder indicating a willingness to grant a license either without compensation or on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain a license.

Published by

Alliance for Telecommunications Industry Solutions
1200 G Street, NW, Suite 500
Washington, DC 20005

Copyright © 2019 by Alliance for Telecommunications Industry Solutions
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher. For information contact ATIS at 202.628.6380. ATIS is online at < <http://www.atis.org> >.

Wireless Emergency Alert (WEA) 3.0 Mobile Device Behavior (MDB) Specification

Alliance for Telecommunications Industry Solutions

Approved May 2, 2015

Abstract

This specification defines a common set of requirements for GSM, UMTS, LTE, and 5G based mobile devices. Implementation of the requirements contained within this specification is mobile device manufacturer dependent. This Standard supports the requirements of the FCC Second Report & Order and the FCC Second Order on Reconsideration 18-4.

Foreword

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Wireless Technologies and Systems Committee (WTSC) develops and recommends standards and technical reports related to wireless and/or mobile services and systems, including service descriptions and wireless technologies. WTSC develops and recommends positions on related subjects under consideration in other North American, regional, and international standards bodies.

The mandatory requirements are designated by the word shall and recommendations by the word should. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word may denotes an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

This ATIS Standard is a revision of ATIS-0700036.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunication Industry Solutions, WTSC, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, WTSC, which was responsible for its development, had the following leadership:

- D. Zelmer, WTSC Chair (AT&T)
- M. Younge, WTSC Vice Chair (T-Mobile)
- P. Musgrove, WTSC SN Chair and Technical Editor (AT&T)
- G. Schumacher, WTSC SN Vice Chair (Sprint)

The Systems & Networks (SN) subcommittee was responsible for the development of this document.

Table of Contents

Preface	1
1 Scope, Purpose, & Application	1
1.1 Scope	1
1.2 Purpose	1
1.3 Application	2
2 References	3
2.1 Normative References	2
2.2 Informative References	3
3 Definitions, Acronyms, & Abbreviations	3
3.1 Definitions	3
3.2 Acronyms & Abbreviations	4
4 Assumptions	4
5 Mandated Mobile Device Requirements	5
5.1 Common Audio Attention Signal	6
5.2 Common Vibration Cadence	7
6 General Mobile Device Requirements	8
6.1 Preemption of Voice and Data Calls	9
6.2 WEA Priority over Other Mobile Device Functions	10
6.3 Mobile Device Support of Required Monthly Test (RMT)	11
6.4 Mobile Device Support of State/Local WEA Test Messages	11
6.5 Mobile Device Handling of WEA Messages in Multiple Languages	12
6.6 Detection of Duplicate WEA Alerts	12
6.7 Mobile Device Support of Public Safety Messages	13
6.8 Mobile Device Support for Device-Enabled Geo-Fencing (DBGF)	13
7 Feature Interaction	14
7.1 Reception While Mobile Device Busy	14
7.2 WEA Message Initiation of Other Functions on Mobile Device	14
7.3 Behavior When WEA Alert Received After SMS/MMS	15
7.4 Behavior When WEA Alert Received after Non-WEA Broadcast Message	15
7.5 Behavior When SMS/MMS Received After WEA Alert	15
7.6 Behavior When Non-WEA Broadcast Message Received After WEA Alert	15
7.7 Behavior When Incoming Phone Call Received After WEA Alert	16
7.8 Behavior When Voice Mail Notification Received After WEA Alert	16
7.9 Behavior for Multiple WEA Alerts	16
8 WEA Configuration Options	16
8.1 WEA Alert Opt-Out Options	17
8.2 WEA Audio Attention Signal Options	18
8.3 WEA Vibration Cadence Options	19
8.4 WEA Preferred Language Options	19
9 Considerations for Individuals with Special Needs	20
A WEA Mobile Device Opt-Out Options Menu	21

B	Flow Chart to Illustrate Mobile Device Principles	23
B.1	Main Flow	24
B.2	WEA Display Handling	26
B.3	WHAM Handling	28

Table of Figures

Figure 5.1:	Temporal Pattern of Common Audio Attention Signal	6
Figure 5.2:	Temporal Pattern of Common Vibration Cadence	7
Figure B.1:	Flow Chart Illustrating Mobile Device Principles with Multi-Language Support	24
Figure B.2:	WEA Display Handling	26
Figure B.3:	WHAM Handling	28

Table of Tables

Table 8.1:	WEA 3.0 - Imminent Threat Message Categorization	17
------------	--	----

ATIS Standard on –

Wireless Emergency Alert (WEA) 3.0 Mobile Device Behavior (MDB) Specification

Preface

The authority-to-individual emergency alerting capability to mobile devices was originally called Commercial Mobile Alert System (CMAS) in the first three Reports and Orders from the Federal Communications Commission (FCC). This standard was originally developed based upon the CMAS terminology and CMAS was operational in April 2012. However, in February 2013, the FCC renamed CMAS to Wireless Emergency Alerts (WEA) with associated updates to the appropriate sections of Part 11 of the 47 CFR. Subsequently, the FCC has issued additional enhancements and rules for this government-to-individual emergency alerting capability to mobile devices and these are identified as modifications to WEA.

Consequently, this specification may use both the term CMAS and the term WEA. These terms should be considered as equivalent terms, with WEA being the preferred term.

This ATIS specification is the WEA 3.0 standard for the WEA 3.0 mobile device behavior and is based upon the WEA enhancements identified in the January 30, 2018 FCC Second Report & Order and Second Order on Reconsideration, FCC 18-4 [Ref 14]. The use of the term WEA in this specification refers to WEA 3.0, unless otherwise specifically indicated. This specification is targeted at participating Commercial Mobile Service Providers (CMSPs) per the FCC definition described in the *ATIS-0700035 Wireless Emergency Alert (3.0) Service Description* [Ref 100]. All references to CMSPs in this specification refer to participating CMSPs.

The regulatory background is described in detail in the Service Description in ATIS-0700035 [Ref 100].

1 Scope, Purpose, & Application

1.1 Scope

One of the objectives of this WEA specification is to define a set of requirements for the behavior of the mobile devices whenever a WEA alert message is received. This specification defines a set of requirements for Global System for Mobile Communications (GSM), Universal Mobile Telecommunication System (UMTS), Long-Term Evolution (LTE), and 5G based mobile devices. Implementation of the requirements contained within this specification is mobile device manufacturer dependent.

Even though the scope of WEA includes paging systems, the behavior of paging devices for WEA alert messages is not contained within this specification.

More information about previous versions of WEA can be found in the WEA 3.0 Service Description [Ref 100].

1.2 Purpose

The purpose of this specification is to define the WEA 3.0 set of requirements for GSM, UMTS, LTE, and 5G based mobile devices behavior. This WEA 3.0 mobile device behavior specification is based upon the WEA enhancements identified in the January 2018 FCC Second Report & Order and Second Order on Reconsideration, FCC 18-4 [Ref 14].

Assumptions, requirements, and principles from ATIS-0700036, *Enhanced Mobile Device Behavior Specification* which are applicable to WEA 3.0 are included in this ATIS specification.

A common set of WEA requirements for the mobile device behavior will allow for a consistent user experience regardless of the associated wireless technology of the mobile device. Additionally, this common set of WEA